

Please amend the specification as follows:

[00058] In figure 9, an example of the “set of simulation results associated, respectively, with a set of grid blocks of the simulation grids” 48, which are displayed on the 3D viewer 44e of the workstation 44 of figures 6, 7, and 8, is illustrated ~~in figure 9.~~

[00060] In figure 10, the workstation 44 of figure 7 is illustrated again ~~in figure 10.~~ However, in figure 10, the storage medium (CD-Rom) 46 stores the Flogrid software 46a, the Eclipse simulator software 46b, and the Eclipse Office software 46c of the present invention interposed between the Flogrid software 46a and the Eclipse simulator software 46b. When the CD-Rom 46 is inserted into the workstation 44, the Eclipse Office software 46c in addition to the Flogrid software 46a and the Eclipse simulator software 46b are loaded from the storage medium (CD-Rom) 46 into the workstation memory 44a of figure 10. As a result, as shown in figure 10, the workstation memory 44a now stores three software packages: the Flogrid software 46a, the Eclipse office software 46c of the present invention, and the Eclipse simulator software 46b.

[00062] In operation, in figure 12, the Eclipse Office software 46c receives the data files associated with the raw data 50 and the data files generated by the pre-processor programs 52 and, responsive thereto, the Eclipse Office software 46c will collect all such data files and pass edited versions of such data files to the Eclipse simulator software 46b. The Eclipse simulator software 46b ~~be~~ is executed by workstation processor 44d of figure 10. However, during the execution of the Eclipse simulator software 46b by the workstation processor 44d of figure 10, the Eclipse simulator software 46b will receive and utilize the data files associated with the raw data 50 of figure 12 and/or the data files generated by the pre-processor programs 52 of figure 12; and, during that execution of the Eclipse simulator software 46b, in response to these aforementioned data files, the Eclipse simulator software 46b will be generating a “set of simulation results”. That “set of simulation results” will be passed back from the Eclipse simulator software 46b to the Eclipse Office software 46c. When the Eclipse Office software 46c receives that “set of simulation results”, the Eclipse Office software 46c will be re-transmitting that “set of

simulation results” to the “recorder or display or 3D viewer” 44e of figures 10 through 12 for displaying and/or recording that “set of simulation results” on the 3D viewer 44e at each instantaneous point in time. Bear in mind that the “set of simulation results” will be generated from the Eclipse simulator software 46b during its execution by the workstation processor 44d, and that “set of simulation results” will be instantaneously displayed, by the Eclipse Office software 46c at each point in time, on the “recorder or display or 3D viewer” 44e of figure 12. As a result, the Eclipse Office software 46c will instantaneously “display or report results” 44e1 in response to the raw data files 50 and/or in response to the data files provided by the pre-processor programs 52, both during and after the execution of the Eclipse simulator software 46b by the workstation processor 44d. Refer now to figure 13 for a more complete description of this functional operation.

[00066] The functions provided by the case manager 46c1, the case builder 46c2, the run manager 46c3, and the results files 46c4 in addition to the results viewer 44e1 1A and the report generator 44e2 1B, will become evident in the following paragraphs with reference to figures 14 through 17 of the drawings.

[00075] However, in addition to the input “raw data” 50 and the other input data originating from the preprocessor programs 52 (which are all being made available to the case builder 46c2 of figure 13), the case/project manager 46c1 of figure 13, in accordance with one major aspect of the present invention, also contains a plurality of additional “test data files” which can also be made available to the case builder/data manager 46c2. Those additional “test data files” are illustrated in figure 14. In figure 14, those additional “test data files” are stored in the case/project manager 46c1 in a “tree-like” fashion. That is, those “test data files” are stored in the case/project manager 46c1 of figure 13 in the form of a “tree”. For example, the broadest category of the test data files or “case scenarios” stored in the case/project manager 46c1 is the “new” 56 test data file of figure 14. However, if the user/operator wants to select certain other supersets of that “new” 56 test data file, the operator would then select either the “new-1” 58 superset test data file, or the “new-2” 60 superset test data file. On the other hand, if the operator wants to select still other supersets of the “new-1” 58 superset test data file or the “new-

2” 60 ~~subset~~ superset test data file, the operator can select any one or more of the following supersets of the superset test data files 58 or 60: supersets 62, 64, 66, 68, 70, 72 for the superset test data file 58, and supersets 74, 76, 78, or 80 for the superset test data file 60 of figure 14. Each superset of the test data files of the case manager 46c1 of figure 14 contains certain unique parameters which are useful when running the Eclipse simulator software 46b. As a result, the operator sitting at the workstation 44 of figure 10 may want to select one or more of the supersets of test data files 56 through 80 in figure 14 in order to study the resulting “results” stored in the results files 46c4 of figure 13 which are generated when the selected one or more supersets of test data files 56 through 80 are used by the simulator 46b. The operator can study those “results”, stored in the results files 46c4, by viewing those “results” on the results viewer 1A of figure 13 or reading a report of those results on a report generated by the report generator 1B of figure 13.

[00076] In any event, in figure 13, if the raw data 50 is received by the case builder 46c2, the case builder 46c2 will allow the operator to edit that raw data 50, and the case builder 46c2 of figure 13 will present the edited raw data 50 to the run manager 46c3 for submission of that edited raw data 50 to the Eclipse simulator 46b. On the other hand, if the keyword data from the preprocessor programs 52 are received by the case builder 46c2, the case builder 46c2 will allow the operator to edit the preprocessor program 52 keyword data, and the edited preprocessor program keyword data will be submitted by the case builder 46c2 to the run manager 46c3 for submission of that data to the Eclipse simulator 46b. However, if the operator selects one or more of the sets or supersets of the test data files 56 through 80 in the case manager 46c1 of figure 14, the one or more selected sets or supersets of test data files in the case manager 46c1 (one or more of 56 - 80) will be submitted by the case manager 46c1 to the case builder 46c2 of figure 13, and the case builder 46c2 will allow the operator sitting at the workstation 44 to edit those test data files. The resulting edited test data files will be submitted by the case builder 46c2 to the run manager 46c3 for submission of the edited test data files to the Eclipse simulator 46b.

[00098] The Eclipse Office software 46c provides tools to allow for the generation of grid geometry and grid properties, including maps, faults, boundaries, wells, aquifers, layers, grid properties, and simulation grid builder, and other general abilities. Each of these will be discussed in detail, as follows:

[000180] 1. Define and Analyze Reservoir Properties - block 146

- a) SCAL - block 148
  - i) Corey Exponents - block 148
  - ii) Detailed Analysis via SCAL - block 148
  - iii) Direct Input - block 148
  - iv) Region Painter - block 148
- b) ~~Initialization~~ Initialisation - Block 150
  - i) Contacts and Static Pressure - block 150
  - ii) Region Painter - block 150
    - a) simple RFT pressure vs. Depth analysis
  - iii) Calculated (Enumeration) - block 150
  - iv) Material Balance Analysis - block 150
    - a) STOOIP determination
  - v) Restart from previous run - block 150
- c) Wells, Groups and Network - block 152
  - i) Wells - block 152
    - a) Detailed Analysis via Schedule
    - b) Basic setup (as in PEBI)
    - c) Decline curve analysis
  - ii) Group and Network Setup - block 152
    - a) Network hierarchy
    - b) Lift curve analysis via VFPI
    - c) Prediction generator
- d) Output - block 154
  - i) Frequency

**[000194]** Additional options (not shown in figure 25) will include:

1. import of PVT data from existing dataset
2. support for more than one PVT region
3. compositional and thermal keywords
4. region painter

**[000201]** Additional options (not shown in figure 26) will include:

1. import of SCAL data from existing dataset
2. support for more than one SCAL region
3. three phase relative permeability correlation
4. region painter